AMENDMENTS TO THE CLAIMS

1-27. (Cancelled)

28. (Currently amended) ~~The~~ A method of ~~Claim 14~~ neutralizing, removing and/or preventing the growth of hyperproliferative undifferentiated, or virally infected cells suspended in a physiological fluid comprising:

placing a compartment containing the physiological fluid in a water bath;

~~wherein~~ emitting ultrasound ~~comprises emitting ultrasound~~ having a frequency higher than 100 kHz into said water bath at a power level that is about 7mW/cm^3; and

emitting gas comprising microbubbles into the ultrasound field in the compartment containing the physiological fluid, such that the emission of ultrasound and gas bubbles induces significant programmed cell death in the hyperproliferative, undifferentiated, or virally infected cells without causing significant cavitation or significantly heating the fluid so as to maintain the temperature of the physiological fluid at less than 40 degrees C.

29. (Cancelled)

30. (New) The method according to Claim 28, wherein the microbubbles are not ozone bubbles.

31. (New) The method according to Claim 28, wherein the microbubbles are selected from the group consisting of air and oxygen bubbles.

32. (New) The method according to Claim 28, wherein the physiological fluid is administered to a mammal and/or extracted from a mammal.

33. (New) The method according to Claim 28, wherein the physiological fluid is selected from the group consisting of blood, plasma, serum and cerebrospinal fluid.

34. (New) The method according to Claim 28, wherein the average diameter of the microbubbles is less than 50 μm.

35. (New) The method according to Claim 28, wherein the average diameter of the gas microbubbles is less than 30 μm.

36. (New) The method according to Claim 28, wherein the ultrasound emitted into the compartment does not generate a stationary field phenomenon.

37. (New) The method according to Claim 28, further comprising emitting light having an electromagnetic radiation mainly in the visible range into the ultrasound field.

38. (New) The method according to Claim 28, wherein the hyperproliferative cells are selected from the group consisting of tumor cells, bone marrow cells, stem cancer cells, and precancerous cells.

39. (New) The method of Claim 28, wherein the hyperproliferative cells are leukemic cells.

40. (New) The method of Claim 28, further comprising supplying power to the ultrasound emitter at less than 1 W/cm^2.